



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/972,989

10/10/2001

Alan F. Graves

08-890943US

4772

7590

11/14/2005

GOWLING LAFLEUR HENDERSON

Suite 2600

160 Elgin Street

Ottawa, ON K1P 1C3

CANADA

EXAMINER

WANG, QUAN ZHEN

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/972,989

Applicant(s)

GRAVES ET AL.

Examiner

Quan-Zhen Wang

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 19-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1-18) in the reply filed on 10/4/2005 is acknowledged. The traversal is on the ground(s) that "a terminal of a point-to-point network may have an 'grooming' function such as the edge node in Figure 1, and thus having the need for an optical switch". This is not found persuasive because claims 1-18 drawn to a method of optical wavelength allocation in a photonic network and do not require an optical switching node that is consist of a photonic switch core having a plurality of inputs and outputs, a wavelength division demultiplexer coupled to a subset of the plurality of inputs, and a wavelength division multiplexer coupled to a subset of the plurality of outputs.

The requirement is still deemed proper and is therefore made FINAL and only elected claims 1-18 are examined.

### ***Specification***

2. Claims 1 and 10 are objected to because of the following informalities:

Regarding claim 1, "... in **an** photonic network ..." in line 1 should read "... in **a** photonic network ...".

Regarding claim 10, "... in **an** photonic network ..." in line 1 should read "... in **a** photonic network ...".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-7, 10, 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Saleh et al. (U.S. Patent US 6,512,614).

Regarding claims 1 and 10, Saleh discloses a method of optical wavelength allocation in an photonic network (fig. 6, network 600) comprising the steps of: generating a first plurality of optical wavelengths (fig. 6,  $\lambda_1$ - $\lambda_n$ ) compatible with a first grid spacing (fig. 3, grid 306) at a first location in the network (fig. 6, node 602); selecting a predetermined subset of wavelengths (fig. 6,  $\lambda_3$  and  $\lambda_6$ ) from the first plurality of optical wavelengths; and transmitting the predetermined subset of wavelengths (fig. 6,  $\lambda_3$  and  $\lambda_6$ ) to a second location (fig. 6, node containing multiplexer 606M) that is compatible with a second grid spacing (fig 6, grid spacing =  $\lambda_6 - \lambda_3$ ) greater than the first grid spacing (column 6, lines 10-42).

Regarding claims 3 and 12, at least one of the subset of wavelengths in Saleh's system is a data modulated wavelength (fig. 6, data for customer 604P and 604Q).

Regarding claims 4 and 13, Saleh further teaches that the first grid spacing is dense mode spacing (column 3, lines 12-31).

Regarding claims 5 and 14, Saleh further teaches that the first grid spacing is 100 GHz (fig. 3, spectral comb 304).

Regarding claims 6 and 15, Saleh further teaches that the first grid spacing is 50 GHz (fig. 3, spectral comb 302).

Regarding claims 7 and 16, Saleh further teaches that the first grid spacing is sparse mode spacing (column 4, lines 34-49; "coarsely packed wavelengths").

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8-9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saleh et al. (U.S. Patent US 6,512,614).

Regarding claims 8-9 and 17-18, Saleh differs from the claimed invention in that Saleh does not specifically teach that the grid spacing is 400 GHz or 500 GHz. However, Saleh further teaches that the wavelengths should be more coarsely packed (column 4, lines 34-49). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to set the grid of the channel spacing

Art Unit: 2633

to be more spaced, such as 400 GHz or 500GHz, in order to allow low-cost, passive multiplexers to be used.

7. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saleh et al. (U.S. Patent US 6,512,614) in view of Wagner (U.S. Patent US 5,221,983).

Regarding claims 2 and 11, Saleh differs from the claimed invention in that Saleh does not specifically teach that at least one of the subset of wavelength is an unmodulated wavelength. However, it is well known in the art to transmit an unmodulated wavelength to a subscriber in a fiber optic subscriber network. For example, Wagner discloses to transmit an unmodulated wavelength to a subscriber (Wagner, abstract). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to transmit an unmodulated wavelength to a subscriber, as it is taught by Wagner, in the system of Saleh in order for the subscriber to use in subsequent upstream transmissions (Wagner, abstract).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2633

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw  
11/7/2005

  
**M. R. SEDIGHIAN**  
**PRIMARY EXAMINER**